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cc: Ms. Marlene H. Dortch, Commission Secretary
Mr. Louis Peraertz, Esq., Spectrum and Competition Policy Division

Dear Staff of the Federal Communications Commission:

The Division of Migratory Bird Management (DMBM), U.S. Fish & Wildlife Service (FWS or Service) is pleased to comment on Avatar Environmental, LLC's (Avatar) recommendations regarding migratory bird collisions with communications towers. Our comments follow a process initiated by a Notice of Inquiry published by the Federal Communications Commission (FCC) in August 2003 -- In the Matter of Effects of Communication Towers on Migratory Birds. The Service provided detailed public comments and suggestions on this document following its publication.

AVATAR'S CRITIQUE OF THE EXISTING STATE OF KNOWLEDGE:

With but a few caveats, the Service generally agrees with the 9 statements made regarding the current state of knowledge concerning migratory bird impacts from communication towers.

Bullet 1: "The greatest bird mortality tends to occur on nights with low visibility conditions, especially fog, low cloud ceiling, and other overcast conditions." Service response: FCC should qualify this statement as it is based especially on bad weather during migration periods. The literature supports the highest weather-related mortality during spring and fall migrations.

Bullet 2: "All other things being equal, taller towers with lights tend to represent more of a hazard to birds than shorter, unlit towers." Bullet 3: "Towers with guy wires are at higher risk than self-supporting towers." Service response: Bullets 2 and 3, in-and-of-themselves, are correct, however a new bullet needs to be added which should indicate that the towers of greatest risk appear to be multiple-guyed, multiple-lit (especially with incandescent lighting), very tall towers.

Bullet 5: "Certain avian families tend to be more affected than others, among them vireos, warblers, and thrushes." Service response: This bullet indicates that certain avian species, especially vireos, warblers, and thrushes, are more affected by tower strikes than are other suites of species. While we concur with this statement, it does not capture the magnitude of documented mortality affecting some 350 species of mostly neotropical migrants. It would be helpful to clarify the statement by providing the additional detail.

Bullet 7: "There are no studies to date that demonstrate an unambiguous relationship between avian collisions with communication towers and population decline of migratory bird species." Service response: While we concur with

this statement, it is important to acknowledge that an estimated minimum of 4-5 million birds likely die from collisions with communication towers annually in the United States, and that the number of towers on the landscape continues to grow. Because of limited avian monitoring and the lack of a current assessment of cumulative impacts from tall structures, it still is impossible to directly correlate collisions to impacts on bird populations. These impacts may be additive to other forms of natural mortality and they certainly are not benefitting bird populations overall. These qualifiers should be added to the existing statement.

Bullet 8: "Although biologically significant tower kills have not been demonstrated in the literature, the potential does exist, especially for threatened and endangered species." Service response: The phrase "biologically significant" is ambiguous. For example, a kill of more than 12,000 birds in one night, as C. Kemper documented (all carcasses identified to species) in 1963, may have a significant impact on local bird populations. Where species are impacted, such as those listed on the Birds of Conservation Concern 2002 (FWS 2003) or those Federally listed as threatened or endangered species, population impacts may be significant. Because many of the "conservation species" are not rigorously monitored, communication tower mortality may be a significant, unmonitored mortality factor. Because FWS takes the precautionary approach in attempting to manage most avian species, we are concerned about how this issue is portrayed, and more specifically, how it may be misrepresented or misinterpreted by others. We suggest the phrase be clarified.

SHORT-TERM RECOMMENDATIONS FROM AVATAR:

1) "Continue participation in the Communication Tower Working Group and monitor proposed research projects, by supporting its Research Subcommittee in developing mitigation measures and other information important in understanding the factors contributing to bird collisions." Service response: The Service appreciates Avatar's recommendation to support the Communication Tower Working Group's (CTWG) Research Subcommittee in its efforts to support research that will help solve the bird collision problem. The Service has convened the next meeting of the Subcommittee for April 21, 2005, at Patuxent Wildlife Research Area, Laurel, MD, to continue a dialogue on research needs and current research efforts.

2) "Work with applicable research entities and the telecommunication industry to identify the most appropriate approach and mechanism to develop standardized methods and metrics for data collection and monitoring." Service response: We acknowledge the need to work with the applicable research entities and the industry to identify the most appropriate approach and mechanism(s) to develop guidance on standard methods and metrics for data collection and monitoring at communication towers. The peer-reviewed Metrics and Methods document developed by Anderson et al. (1999) to conduct research to study the effects of wind turbine-avian interactions sets a good standard for the development of a document for the communication tower industry. Any such guidance must be consistent, standardized, but adaptable to specific sites, and needs to be scientifically rigorous, sound, and peer reviewed by professional ornithologists, technicians, and other specialists -- including biologists with FWS.

3) "Develop guidance on standard methods to account for the following survey biases: scavenger and predator removal, crippling, searcher efficiency, and habitat." Service response: We acknowledge the need for standardized,

consistent, scientifically-sound guidance that addresses survey biases, including scavenger and predator removal, crippling loss, searcher efficiency, and habitat variables. That guidance must also be peer reviewed and should be part of a metrics and methods manual for communication tower research.

4) "Continue to research why birds are attracted to artificial lights on towers." Service response: Many scientists, including Service biologists and other specialists, continue to feel that artificial lighting is the key attractant for birds to communication towers, especially during spring and fall nighttime migrations under conditions of inclement weather. Therefore, we are and will continue to oversee research on bird attraction to artificial lighting. Currently, several research studies are ongoing, looking specifically at lighting, most notably at State Police communication towers in Michigan (J. Gehring, Principal Investigator [PI]; A. Manville, Service lead) and using a portable lighting trailer (W. Evans, PI). A U.S. Coast Guard tower study, which we hope will begin this calendar year, also is designed to study lighting impacts.

5) "Encourage the Federal Aviation Administration, the lead agency on lighting issues, to continue research on what aspects of avian vision contribute to collisions with towers." Service response: This statement is misleading and needs to be corrected. The Federal Aviation Administration (FAA) is indeed the lead agency involved with structural lighting issues, but they do not conduct research on aspects of avian vision that contribute to collisions with towers. The Airport Technology R & D Branch, William J. Hughes Technical Center, Atlantic City, NJ, conducts studies on pilot conspicuity regarding pilot warning lighting. Independent researchers (e.g., R. Beason, USDA/APHIS; W. Hodos, Univ. MD; and W. Evans, Old Bird Inc., Ithaca, NY) are all involved in various aspects of avian vision research. Once the research community identifies those factors associated with pilot warning lights that attract or do not attract birds, then FWS can request studies by the Hughes Technical Center into non-attractant lighting to assess its safety for pilots. FAA continues to be a member of the CTWG, enabling the Service to maintain its coordination with the FAA.

6) "Recommend that those monitoring towers for mortality and abundance of birds near towers also collect information on behaviors to avoid collisions." Service response: Incumbent in any avian tower collision study are 2 components: mortality monitoring and behavioral assessment. The Service will continue to push for avian behavioral research, looking at avoidance, attraction, or no effects to tower presence. Tools such as NEXRAD radar, vertical and horizontal marine radars (e.g., BIRDRAD), thermal imagery, night vision assessments, and acoustic monitoring are all research tools which will continue to be utilized to assess bird behavior.

7) "Provide guidance to measure the impact that avian mortality at communication towers has on resident bird populations." Service response: The Service continues to be very concerned about tower impacts to local resident bird populations. Efforts will continue to focus on better determining local effects.

8) "Provide guidance to study the impact that different between bird species have on the susceptibility of certain bird species to tower collisions." Service response: Vulnerability to collisions, including at the individual species and species suite levels, will continue to be a priority for the Service. Moreover, some suites of species, e.g. thrushes, vireos, and warblers, also include individual species whose populations are in decline, some falling precipitously.

9) "Develop baseline information on bird densities, movements, altitudes, and behaviors during migration near tower sites." Service response: The Service acknowledges the need to develop databases on bird densities, movements (e.g., via flyways, broad-front migrations), altitudes of flight, selection of stopover habitats, site avoidance, and migration chronology that may be impacted by the presence of communication towers. Research by D. K. Dawson, J. Ruth, and R. Diehl, all of the USGS, and others should begin to provide a better picture of how birds utilize habitats.

10) "Encourage research on potential measures that might mitigate avian mortality, particularly mass mortality, at communication towers." Service response: The Service acknowledges that the major focus of avian-communication tower research is to determine specifically why major mortality events occur, and what can be done to avoid them.

11) "Determine whether migration measures used for transmission lines and wind turbines are appropriate for communication towers." Service response: The Service has recommended in our voluntary communication tower guidance use of bird deterrents on guy wires that were originally developed for high-tension transmission lines. Admittedly, these deterrent devices need to be rigorously tested in robust, well-designed, peer-reviewed communication tower studies. Many have been scientifically studied on power lines, showing strike reductions of greater than 65% in some cases. Where bird electrocutions at communication towers are a problem, voluntary guidance published in the Suggested Practices to Reduce Electrocutions at Power Lines (Avian Power Line Interaction Committee 1996) is already recommended in our guidance and should be used. It represents a well-documented, scientifically-tested protocol that works. Other measures being used or proposed for use by the power line and wind turbine industries, that show promise in reducing bird strikes at communication towers, should also be rigorously tested on communication towers and their infrastructure, following the peer-review of research protocols.

12) "Develop a more specific set of FCC National Environmental Policy Act biological scoping issues for the Environmental Checklist Assessment." Service response: The Service has long contended that all birds protected by the Migratory Bird Treaty Act (MBTA; currently 836 species) should be included as part of the FCC's checklist review, not just Federally-listed avian (and other) species. By amending the process, this would make environmental review more meaningful and effective since potentially all MBTA-protected birds are at risk.

13) "Readdress U.S. Fish and Wildlife Service voluntary guidelines to eliminate some of the confusion regarding their voluntary implementation and provide comment on those components about which more research is necessary." Service response: One major industry issue about our communication tower guidance was their complaint that no public comment period had been made available before the guidance was published in September 2000. Because avian-tower research is currently ongoing in MI, CO, AZ, PA, and elsewhere, new findings will almost certainly result in the need to update our guidance. Consistent with the opportunity to provide comment on our interim voluntary Service wind turbine guidance (comment period open through July 7, 2005), and a proposed further extension of the comment period on our updated voluntary wind guidance before it is republished, the Service will very likely open up a comment period on our communication tower guidance before it is officially released as an updated document. As we have done with the wind issues, the Service will likely hold public workshops on our communication tower guidance to help clarify its voluntary nature and hopefully avoid any confusion. If the

industry is going to willingly address the collision problem, they will need buy-in into the process.

LONG-TERM RECOMMENDATIONS BY AVATAR:

1) "Review the results of current studies such as the Michigan State Police Tower Study and U.S. Coast Guard "Rescue 21" Study to incorporate those results into the FCC's review of tower applications." Service response: We wholeheartedly concur with this recommendation. Phase 1 of the USCG study will probably not begin until summer 2005, at the earliest, so it may take several years to acquire meaningful results. FWS has committed to continue working closely with the FCC, FAA, other agencies, and participants in the CTWG to make this happen.

2) "Work with the CTWG's Research Subcommittee to produce a comprehensive guidance document with input from applicable research entities in order to standardize research approaches and facilitate problem resolution." Service response: We are very pleased to hear Avatar propose the creation of a comprehensive guidance document. There indeed need to be standardized research approaches, protocols, and problem-solving tools available, much like those already available to the wind industry (Metrics and Methods 1999). We strongly recommend that approaches, protocols, and tools all be peer-reviewed. The recommended guidance document should also be peer-reviewed.

3) "Conduct laboratory controlled studies into avian vision that are tiered off of the study prepared by R.C. Beason, entitled, "the bird brain: magnetic cues, visual cues, and radio frequency effects." Service response: Since avian vision, color perception, and thresholds for lighting intensity and duration are all important issues which must be addressed if we are to understand more about avian light attraction, this recommendation is very important.

4) "Develop appropriate criteria or ecological parameters, similar to those approaches used for wind turbines." Service response: Because site selection is such an important issue, whether it be for wind facilities or communication towers, the Service may attempt to incorporate a site review and ranking process once we begin to update our voluntary communication tower guidance. This proposal would be open to public review and comment (see item 13 above) and would be designed to help proponents select sites that are most bird-friendly.

5) "Adapt the Potential Impact Index, which the FWS uses to assess the impact of the locations of wind turbines on the environment for use with communication towers." Service response: This is an excellent suggestion which would result in an actual site-ranking score and help a proponent select the most bird-friendly site, or avoid a site which is highly problematic.

This concludes our recommendations on the Avatar report. We appreciate the opportunity to comment and look forward to continued progress in resolving this important matter. Respectfully submitted,

/s/
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U.S. Fish & Wildlife Service